

Docket No. 199858US2SRD

IN RE APPLICATION OF: Kenichi ICHIMURA, et al.

SERIAL NO: 09/714,193

FILED: November 17, 2000

FOR: METHOD FOR QUANTUM INFORMATION PROCESSING AND QUANTUM INFORMATION PROCESSOR

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Transmitted herewith is an amendment in the above-identified application.

- ☐ No additional fee is required
- ☐ Small entity status of this application under 37 C.F.R. §1.9 and §1.27 is claimed.
- ☐ Additional documents filed herewith: Marked-Up Copy

The Fee has been calculated as shown below:

CLAIMS	CLAIMS REMAINING		HIGHEST NUMBER PREVIOUSLY PAID	NO. EXTRA CLAIMS	RATE	CALCULATIONS
TOTAL	18	MINUS	20	0	x \$18 =	\$0.00
INDEPENDENT	2	MINUS	3	0	x \$84 =	\$0.00
		<input type="checkbox"/> MULTIPLE DEPENDENT CLAIMS			+ \$280 =	\$0.00
		TOTAL OF ABOVE CALCULATIONS				\$0.00
		<input type="checkbox"/> Reduction by 50% for filing by Small Entity				\$0.00
		<input type="checkbox"/> Recordation of Assignment			+ \$40 =	\$0.00
		TOTAL				\$0.00

- ☐ A check in the amount of **\$0.00** is attached.
- ☒ Please charge any additional Fees for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.
- ☒ If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time may be charged to Deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

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DOCKET NO.: 199858US2SRD

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

W.A. Macleay
5-6-03

IS RE APPLICATION OF :

KOUCHI ICHIMURA, ET AL.

: EXAMINER: KAO, C. C. G.

SERIAL NO: 09/714,193 :

FILED: NOVEMBER 17, 2000 :

: GROUP ART UNIT: 2882

FOR: METHOD FOR QUANTUM
INFORMATION PROCESSING AND
QUANTUM INFORMATION
PROCESSOR :

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TECHNOLOGY CENTER 2800

AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

In response to the Office Action dated January 30, 2003, please amend the above-identified application as follows:

IN THE CLAIMS

Please amend Claims 6 and 14 as shown in clean form below.¹

a 6. (Amended) The method according to claim 1, wherein the states of the three energy levels of each physical system are set to $|0\rangle$, $|1\rangle$, and $|e\rangle$ in order from a lowest energy level, the $|0\rangle - |e\rangle$ transition and the $|1\rangle - |e\rangle$ transition being optically allowed, and wherein a quantum bit is expressed by the state $|0\rangle$, the state $|1\rangle$, or a superposition state thereof, the method further comprising:

in the case where the $|0\rangle - |e\rangle$ transitions of respective physical systems are coupled through a common resonator mode, irradiating the physical systems with light of a frequency

¹ A marked-up copy of the amended portion of the claims is attached hereto.